

What is claimed is:

4. (New) A method of fabricating on an insulating region an amorphous or polycrystalline silicon germanium layer of increased thickness, homogeneity,  
5 uniform grain size distribution and reduced surface roughness, comprising the step of:

providing a seed initiation layer of good seeding capacity and insulating properties between the insulating region and the amorphous or polycrystalline silicon germanium layer.

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5. (New) The method of claim 4, wherein the amorphous or polycrystalline layer contains a diffusion inhibiting agent.

6. (New) The method of claim 5, wherein the diffusion inhibiting agent is  
15 an element from the group consisting of carbon and oxygen.

7. (New) The method of claim 4, wherein the insulating region comprises a SiO<sub>2</sub>-layer.

- 20 8. (New) The method of claim 4 and wherein the seed initiation layer comprises silicon nitride.

9. (New) The method of claim 4, wherein the seed initiation layer is applied to the insulation region prior to application of the amorphous or  
25 polycrystalline layer.

10. (New) The method of claim 4, wherein the amorphous or polycrystalline layer is applied by precipitation.

- 30 11. (New) A method of fabricating a semiconductor component, comprising the steps of:

providing a semiconductor substrate;  
providing an insulating region on the substrate;  
placing a seed initiation layer of silicon nitride on the insulating region;  
depositing an amorphous or polycrystalline silicon germanium layer on

5 the seed initiation layer.

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